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DOCKET NO. P05727 (NATI15-05727)
SERIAL NO. 10/731,661
PATENT**IN THE CLAIMS**

Please amend the claims as follows. Any differences in the claims below and the previous state of the claims are unintentional and in the nature of a typographical error.

1. (Currently Amended) A system for verifying data in a shadow memory, comprising:

a shadow memory initializer operable to detect an initialization event, to initialize a shadow memory based on the initialization event, and to calculate original verification data for the shadow memory, the shadow memory comprising shadow data; and

a shadow memory verifier operable to detect a verification event and to verify the shadow data based on the verification event by calculating current verification data for the shadow memory and determining whether the current verification data matches the original verification data.

2. (Currently Amended) The system of Claim 1, wherein the shadow memory initializer is operable to initialize the shadow memory by storing the original verification data for the shadow memory.

DOCKET NO. P05727 (NAT115-05727)
SERIAL NO. 10/731,661
PATENT

3. (Currently Amended) The system of Claim 2, wherein the shadow memory verifier operable to verify the shadow data by calculating current verification data and comparing the current verification data to the original verification data, the shadow data is verified when the current verification data matches the original verification data, and the shadow data is rejected when the current verification data fails to match the original verification data.

4. (Currently Amended) The system of Claim 3, wherein the initialization event comprises [[ing]] one of: the system being powered up and the shadow data being rejected.

5. (Currently Amended) The system of Claim 1, wherein the verification event comprises [[ing]] one of: a read request being received, a specified clock edge occurring, and a specified number of clock edges passing.

DOCKET NO. P05727 (NAT115-05727)

SERIAL NO. 10/731,661

PATENT

6. (Currently Amended) A system for verifying data in a shadow memory, comprising:

a main memory operable to store main data persistently;

a shadow memory operable to store shadow data temporarily, the shadow data comprising a copy of the main data;

a shadow memory initializer operable to detect an initialization event, to initialize the shadow memory based on the initialization event, and to calculate original verification data for the shadow memory; and

a shadow memory verifier operable to detect a verification event and to verify the shadow data based on the verification event by calculating current verification data for the shadow memory and determining whether the current verification data matches the original verification data.

7. (Currently Amended) The system of Claim 6, wherein the shadow memory initializer is operable to initialize the shadow memory by storing the original verification data for the shadow memory.

8. (Currently Amended) The system of Claim 7, wherein the shadow memory ~~verifier operable to verify the shadow data by calculating current verification data and comparing the current verification data to the original verification data,~~ the shadow data is verified when the current verification data matches the original verification data, and the shadow data is rejected when the current verification data fails to match the original verification data.

DOCKET NO. P05727 (NATH15-05727)
SERIAL NO. 10/731,661
PATENT

9. (Currently Amended) The system of Claim 8, wherein the initialization event comprises one of the system being powered up and the shadow data being rejected.

10. (Currently Amended) The system of Claim 7, wherein the shadow memory initializer is operable to store the original verification data in the shadow memory.

11. (Currently Amended) The system of Claim 6, wherein the verification event comprises one of a read request being received, a specified clock edge occurring, and a specified number of clock edges passing.

12. (Currently Amended) The system of Claim 6, wherein the main memory comprises an EEPROM and the shadow memory comprises a RAM.

DOCKET NO. P05727 (NATI15-05727)
SERIAL NO. 10/731,661
PATENT

13. (Currently Amended) A method for verifying data in a shadow memory, comprising:

initializing a shadow memory, the shadow memory comprising shadow data;

calculating original verification data for the shadow memory;

detecting a verification event; and

verifying the shadow data based on the verification event by calculating current verification data for the shadow memory and determining whether the current verification data matches the original verification data. ; ~~and~~

~~calculating original verification data.~~

14. (Currently Amended) The method of Claim 13, further comprising detecting an initialization event, wherein initializing the shadow memory comprises [[ing]] initializing the shadow memory based on the initialization event.

15. (Currently Amended) The method of Claim 13, wherein initializing the shadow memory comprises [[ing]] copying main data stored in a main memory into the shadow memory and storing the original verification data.

DOCKET NO. P05727 (NATH15-05727)
SERIAL NO. 10/731,661
PATENT

16. (Cancelled).

17. (Currently Amended) The method of Claim ~~[[16]]~~ 13, further comprising verifying the shadow data as valid when the current verification data matches the original verification data.

18. (Currently Amended) The method of Claim ~~[[16]]~~ 13, further comprising rejecting the shadow data when the current verification data fails to match the original verification data.

19. (Currently Amended) The method of Claim 18, wherein the initialization event comprises ~~[[ing]]~~ one of: a ~~[[the]]~~ system being powered up and the shadow data being rejected.

20. (Currently Amended) The method of Claim 13, wherein the verification event comprises ~~[[ing]]~~ one of: a read request being received, a specified clock edge occurring, and a specified number of clock edges passing.

21. (New) The method of Claim 13, wherein verifying the shadow data comprises calculating the current verification data using one or more random entries within the shadow memory.